

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

**CLAIMS**

1. (withdrawn) A sensor, for radiance based diagnostics, comprising:
  - a performing component comprising:
    - at least one radiance source for radiating a tissue; and
    - at least one detector for detecting rays reflected from said tissue; and
    - wherein one surface of said performing component faces said tissue; and
  - an adhering component having one surface facing the tissue; said adhering component configured to fasten the performing component to said tissue such that the radiance source and detector are facing, contiguous with and compress the tissue;
  - wherein said one surface of said performing component protrudes from the plane of the adhering component surface in the direction of the compressed tissue thereby to exclude external light and direct light from the radiance source; and
  - wherein, when operative, the adhering component fastens the performing component to the tissue to the extent that the detector only receives rays which are reflected from within the tissue and whereby external light and direct light from the radiance source are excluded.

2. (withdrawn) A sensor according to claim 1 wherein the adhering component is a tape of adhering material framing the performing component and which, when fastening the performing component to the tissue, contacts the tissue.
3. (withdrawn) A sensor according to claim 1 wherein the adhering component is a tape which, when fastening the performing component to the tissue, overlays the performing component and contacts the tissue.
4. (withdrawn) A sensor according to claim 1 wherein the adhering component is formed as part of the performing component and adheres the performing component to the tissue.
5. (withdrawn) A sensor according to claim 1 wherein the performing component further comprises a partition in between the radiance source and the detector.
6. (withdrawn) A sensor according to claim 5 wherein the partition further surrounds either radiance source or detector or both.
7. (withdrawn) A sensor according to claim 1 wherein the performing component has a performing component surface which faces the tissue, and the adhering component has an adhering component surface which faces the tissue and wherein the performing component surface protrudes from the plane of the adhering component surface in the direction of the tissue.
8. (withdrawn) A sensor according to claim 1 wherein the performing component further comprises a partition in between the radiance source and the detector.
9. (withdrawn) A sensor according to claim 8 wherein the partition further surrounds either the radiance source or the detector or both.

10. (withdrawn) A sensor according to claim 1 further comprising a controlling device capable of sensing and responding to external conditions and capable of controlling sensor components operation.
11. (withdrawn) A sensor according to claim 10 wherein the controlling device is a pressure or proximity detector which enables sensor operation when the performing component is fastened to the tissue to the extent that the detector receives only rays which are transmitted through or reflected from the tissue.
12. (withdrawn) A sensor according to claim 7 further comprising a controlling device capable of sensing and responding to external conditions and capable of controlling the sensor components operation.
13. (withdrawn) A system for radiance based diagnostics comprising:
  - a sensor; and
  - an electronic circuit in communication with the sensor components and capable of controlling the sensor components operation;
  - wherein the sensor comprises:
    - a performing component comprising at least one radiance source for radiating a tissue and at least one detector for detecting rays reflected from said tissue and wherein one surface of said performing component faces said tissue; and
    - having one surface facing the tissue; said adhering component configured to fasten the performing component to said tissue such that the radiance source and detector are facing, contiguous with and compress the tissue;

wherein said one surface of said performing component protrudes from the plane of the adhering component surface in the direction of the compressed tissue thereby to exclude external light and direct light from the radiance source; and wherein, the adhering component fastens the performing component to the tissue to the extent that the detector only receives rays which reflected from within the tissue

14. (withdrawn) A system according to claim 13 wherein the electronic circuit is in communication with and is capable of controlling the operation of either radiance source or detector or both.
15. (withdrawn) A system according to claim 13 wherein the adhering component is a tape of adhering material framing the performing component and which, when fastening the performing component to the tissue, contacts the tissue.
16. (withdrawn) A system according to claim 13 wherein the adhering component is a tape which, when fastening the performing component to the tissue, overlays the performing component and contacts the tissue.
17. (withdrawn) A system according to claim 13 wherein the performing component further comprises a partition in between the radiance source and the detector.
18. (withdrawn) A system according to claim 17 wherein the partition further surrounds either radiance source or detector or both.
19. (withdrawn) A system according to claim 13 wherein the performing component has a performing component surface which faces the tissue, and the adhering component has an adhering component surface which faces the tissue and wherein the performing component surface protrudes from the plane of the adhering component

surface in the direction of the tissue.

20. (withdrawn) A system according to claim 17 wherein the performing component further comprises a partition in between the radiance source and the detector.
21. (withdrawn) A system according to claim 17 wherein the partition further surrounds either the radiance source or the detector or both.
22. (withdrawn) A system according to claim 13 wherein the sensor further comprises a controlling device capable of sensing and responding to external conditions and which controlling device is capable of being in communication with the sensor components, the electronic circuit or both.
23. (withdrawn) A system according to claim 22 wherein the electronic circuit controls the sensor component's operation.
24. (withdrawn) A system according to claim 22 wherein the controlling device is a pressure or proximity detector which enables sensor components operation when the performing component is fastened to the tissue to the extent that the detector receives only rays which are transmitted through or reflected from the tissue.
25. (withdrawn) A system according to claim 22 wherein the controlling device is a pressure or proximity detector which communicates with the electronic circuit to enable sensor components operation when the performing component is fastened to the tissue to the extent that the detector receives only rays which are transmitted through or reflected from the tissue.
26. (withdrawn) A system according to claim 22 wherein the electronic circuit is programmed to operate in accordance with specific conditions communicated by the controlling device.

27. (withdrawn) A method for radiance based analysis of body tissues comprising the steps of
- fastening to the body tissue a sensor according to claim 1;
  - operating the sensor; and
  - obtaining data from the sensor.
28. (withdrawn) A method for radiance based analysis of body tissues comprising the steps of
- fastening to the body tissue a system according to claim 13;
  - operating the system; and
  - obtaining data from the system.
29. (withdrawn) Use of a sensor according to claim 1 in radiance based analysis of body tissues.
30. (withdrawn) Use according to claim 29 wherein the radiance based analysis is reflective pulse oximetry .
31. (withdrawn) Use of a system according with claim 13 in radiance based analysis of body tissues.
32. (withdrawn) Use according to claim 31 wherein the radiance based analysis is reflective pulse oximetry.
33. (previously presented)A sensor, for radiance based diagnostics, comprising
- a performing component comprising at least one radiance source for radiating a tissue and at least one detector for detecting rays emitted from said radiance source;

an adhering component being capable of fastening the performing component to a tissue such that the radiance source and detector are facing and contiguous with the tissue; and

a controlling device, said controlling device being a pressure or proximity detector configured to enable sensor operation when the performing component is fastened to the tissue to the extent that the detector receives only rays which are transmitted through or reflected from the tissue.

34. (previously presented)A system for radiance based diagnostics comprising:

a sensor; and

an electronic circuit in communication with the sensor components and capable of controlling the sensor components operation;

wherein the sensor comprises:

a performing component comprising at least one radiance source for radiating a tissue and at least one detector for detecting rays emitted from said radiance source;

an adhering component being capable of fastening the performing component to a tissue such that the radiance source and detector are facing and contiguous with the tissue; and

a controlling device, said controlling device being a pressure or proximity detector configured to enable sensor operation when the performing component is fastened to the tissue to the extent that the detector receives only rays which are transmitted through or reflected from the tissue.

35. (previously presented)A system for radiance based diagnostics comprising:

a sensor; and

an electronic circuit in communication with the sensor components and capable of controlling the sensor components operation;

wherein the sensor comprises:

a performing component comprising at least one radiance source for radiating a tissue and at least one detector for detecting rays emitted from said radiance source;

an adhering component being capable of fastening the performing component to a tissue such that the radiance source and detector are facing and contiguous with the tissue; and

a controlling device capable of sensing and responding to external conditions and capable of controlling sensor components operation, said controlling device being a pressure or proximity detector which communicates with the electronic circuit to enable sensor components operation when the performing component is fastened to the tissue to the extent that the detector receives only rays which are transmitted through or reflected from the tissue.